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Sequence Listing was accepted.

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Reviewer: Durreshwar Anjum

Timestamp: [year=2009; month=10; day=27; hr=12; min=35; sec=19; ms=79; ]

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Application No: 10563389 Version No: 3.0

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SEQUENCE LISTING

<110> CLAESSEN WELSH, LENA  
OLSSON, ANNA-KARIN

<120> AN ENDOGENOUS PEPTIDE AND ACTIVE SUBFRAGMENTS THEREOF

<130> 15665-0007US1

<140> 10563389

<141> 2009-10-12

<150> PCT/SE04/001091

<151> 2004-07-05

<150> SE 0301988-2

<151> 2003-07-07

<150> US 60/485,185

<151> 2003-07-07

<160> 32

<170> PatentIn Ver. 3.3

<210> 1

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<212> PRT

<213> Homo sapiens

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His His Pro His Ala His His Pro His Glu His Asp Thr His Arg Gln  
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His Pro His

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Thr Lys Pro Pro Phe Lys Pro His Gly Ser Arg Asp His His His Pro  
20 25 30

His Lys Pro His Glu His Gly Pro Pro Pro Pro Pro Asp Glu Arg Asp  
35 40 45

His Ser His Gly Pro Pro Leu Pro Gln Gly Pro Pro Pro Leu Leu Pro  
50 55 60

Met Ser Cys Ser Ser Cys Gln His Ala Thr Phe Gly Thr Asn Gly Ala  
65 70 75 80

Gln Arg His Ser His Asn Asn Asn Ser Ser Asp Leu His Pro His Lys  
85 90 95

His His Ser His Glu Gln His Pro His Gly His His Pro His Ala His  
100 105 110

His Pro His Glu His Asp Thr His Arg Gln His Pro His Gly His His  
115 120 125

Pro His Gly His His Pro His Gly His His Pro His Gly His His Pro  
130 135 140

His Gly His His Pro His Cys  
145 150

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Val Ser Pro Thr Asp Cys Ser Ala Val Glu Pro Glu Ala Glu Lys Ala  
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Leu Asp Leu Ile Asn Lys Arg Arg Asp Gly Tyr Leu Phe Gln Leu  
20 25 30

Leu Arg Ile Ala Asp Ala His Leu Asp Arg Val Glu Asn Thr Thr Val  
35 40 45

Tyr Tyr Leu Val Leu Asp Val Gln Glu Ser Asp Cys Ser Val Leu Ser  
50 55 60

Arg Lys Tyr Trp Asn Asp Cys Glu Pro Pro Asp Ser Arg Arg Pro Ser  
65 70 75 80

Glu Ile Val Ile Gly Gln Cys Lys Val Ile Ala Thr Arg His Ser His  
85 90 95

Glu Ser Gln Asp Leu Arg Val Ile Asp Phe Asn Cys Thr Thr Ser Ser  
100 105 110

Val Ser Ser Ala Leu Ala Asn Thr Lys Asp Ser Pro Val Leu Ile Asp  
115 120 125

Phe Phe Glu Asp Thr Glu Arg Tyr Arg Lys Gln Ala Asn Lys Ala Leu  
130 135 140

Glu Lys Tyr Lys Glu Glu Asn Asp Asp Phe Ala Ser Phe Arg Val Asp  
145 150 155 160

Arg Ile Glu Arg Val Ala Arg Val Arg Gly Gly Glu Gly Thr Gly Tyr  
165 170 175

Phe Val Asp Phe Ser Val Arg Asn Cys Pro Arg His His Phe Pro Arg  
180 185 190

His Pro Asn Val Phe Gly Phe Cys Arg Ala Asp Leu Phe Tyr Asp Val  
195 200 205

Glu Ala Leu Asp Leu Glu Ser Pro Lys Asn Leu Val Ile Asn Cys Glu  
210 215 220

Val Phe Asp Pro Gln Glu His Glu Asn Ile Asn Gly Val Pro Pro His  
225 230 235 240

Leu Gly His Pro Phe His Trp Gly Gly His Glu Arg Ser Ser Thr Thr  
245 250 255

Lys Pro Pro Phe Lys Pro His Gly Ser Arg Asp His His His Pro His  
260 265 270

Lys Pro His Glu His Gly Pro Pro Pro Pro Asp Glu Arg Asp His  
275 280 285

Ser His Gly Pro Pro Leu Pro Gln Gly Pro Pro Pro Leu Leu Pro Met  
290 295 300

Ser Cys Ser Ser Cys Gln His Ala Thr Phe Gly Thr Asn Gly Ala Gln  
305 310 315 320

Arg His Ser His Asn Asn Ser Ser Asp Leu His Pro His Lys His  
325 330 335

His Ser His Glu Gln His Pro His Gly His His Pro His Ala His His  
340 345 350

Pro His Glu His Asp Thr His Arg Gln His Pro His Gly His His Pro  
355 360 365

His Gly His His Pro His Gly His His Pro His Gly His His Pro His  
370 375 380

Gly His His Pro His Cys His Asp Phe Gln Asp Tyr Gly Pro Cys Asp  
385 390 395 400

Pro Pro Pro His Asn Gln Gly His Cys Cys His Gly His Gly Pro Pro  
405 410 415

Pro Gly His Leu Arg Arg Gly Pro Gly Lys Gly Pro Arg Pro Phe  
420 425 430

His Cys Arg Gln Ile Gly Ser Val Tyr Arg Leu Pro Pro Leu Arg Lys  
435 440 445

Gly Glu Val Leu Pro Leu Pro Glu Ala Asn Phe Pro Ser Phe Pro Leu  
450 455 460

Pro His His Lys His Pro Leu Lys Pro Asp Asn Gln Pro Phe Pro Gln  
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Ser Val Ser Glu Ser Cys Pro Gly Lys Phe Lys Ser Gly Phe Pro Gln  
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Val Ser Met Phe Phe Thr His Thr Phe Pro Lys  
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His His His His His His His His  
20 25

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Leu Asp Leu Ile Asn Lys Arg Arg Asp Gly Tyr Leu Phe Gln Leu  
20 25 30

Leu Arg Ile Ala Asp Ala His Leu Asp Arg Val Glu Asn Thr Thr Val  
35 40 45

Tyr Tyr Leu Val Leu Asp Val Gln Glu Ser Asp Cys Ser Val Leu Ser  
50 55 60

Arg Lys Tyr Trp Asn Asp Cys Glu Pro Pro Asp Ser Arg Arg Pro Ser  
65 70 75 80

Glu Ile Val Ile Gly Gln Cys Lys Val Ile Ala Thr Arg His Ser His  
85 90 95

Glu Ser Gln Asp Leu Arg Val Ile Asp Phe Asn Cys Thr Thr Ser Ser  
100 105 110

Val Ser Ser Ala Leu Ala Asn Thr Lys Asp Ser Pro Val Leu Ile Asp  
115 120 125

Phe Phe Glu Asp Thr Glu Arg Tyr Arg Lys Gln Ala Asn Lys Ala Leu  
130 135 140

Glu Lys Tyr Lys Glu Glu Asn Asp Asp Phe Ala Ser Phe Arg Val Asp  
145 150 155 160

Arg Ile Glu Arg Val Ala Arg Val Arg Gly Gly Glu Gly Thr Gly Tyr  
165 170 175

Phe Val Asp Phe Ser Val Arg Asn Cys Pro Arg His His Phe Pro Arg  
180 185 190

His Pro Asn Val Phe Gly Phe Cys Arg Ala Asp Leu Phe Tyr Asp Val  
195 200 205

Glu Ala Leu Asp Leu Glu Ser Pro Lys Asn Leu Val Ile Asn Cys Glu  
210 215 220

Val Phe Asp Pro Gln Glu His Glu Asn Ile Asn Gly Val Pro Pro His  
225 230 235 240

<210> 7

<211> 320

<212> PRT

<213> Homo sapiens

<400> 7

Val Ser Pro Thr Asp Cys Ser Ala Val Glu Pro Glu Ala Glu Lys Ala  
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Leu Asp Leu Ile Asn Lys Arg Arg Asp Gly Tyr Leu Phe Gln Leu  
20 25 30

Leu Arg Ile Ala Asp Ala His Leu Asp Arg Val Glu Asn Thr Thr Val  
35 40 45

Tyr Tyr Leu Val Leu Asp Val Gln Glu Ser Asp Cys Ser Val Leu Ser  
50 55 60

Arg Lys Tyr Trp Asn Asp Cys Glu Pro Pro Asp Ser Arg Arg Pro Ser  
65 70 75 80

Glu Ile Val Ile Gly Gln Cys Lys Val Ile Ala Thr Arg His Ser His  
85 90 95

Glu Ser Gln Asp Leu Arg Val Ile Asp Phe Asn Cys Thr Thr Ser Ser

100 105 110

Val Ser Ser Ala Leu Ala Asn Thr Lys Asp Ser Pro Val Leu Ile Asp  
115 120 125

Phe Phe Glu Asp Thr Glu Arg Tyr Arg Lys Gln Ala Asn Lys Ala Leu  
130 135 140

Glu Lys Tyr Lys Glu Glu Asn Asp Asp Phe Ala Ser Phe Arg Val Asp  
145 150 155 160

Arg Ile Glu Arg Val Ala Arg Val Arg Gly Gly Glu Gly Thr Gly Tyr  
165 170 175

Phe Val Asp Phe Ser Val Arg Asn Cys Pro Arg His His Phe Pro Arg  
180 185 190

His Pro Asn Val Phe Gly Phe Cys Arg Ala Asp Leu Phe Tyr Asp Val  
195 200 205

Glu Ala Leu Asp Leu Glu Ser Pro Lys Asn Leu Val Ile Asn Cys Glu  
210 215 220

Val Phe Asp Pro Gln Glu His Glu Asn Ile Asn Gly Val Pro Pro His  
225 230 235 240

Leu Gly His Pro Phe His Trp Gly His Glu Arg Ser Ser Thr Thr  
245 250 255

Lys Pro Pro Phe Lys Pro His Gly Ser Arg Asp His His His Pro His  
260 265 270

Lys Pro His Glu His Gly Pro Pro Pro Pro Asp Glu Arg Asp His  
275 280 285

Ser His Gly Pro Pro Leu Pro Gln Gly Pro Pro Pro Leu Leu Pro Met  
290 295 300

Ser Cys Ser Ser Cys Gln His Ala Thr Phe Gly Thr Asn Gly Ala Gln  
305 310 315 320

<210> 8

<211> 390

<212> PRT

<213> Homo sapiens

<400> 8

Val Ser Pro Thr Asp Cys Ser Ala Val Glu Pro Glu Ala Glu Lys Ala  
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Leu Asp Leu Ile Asn Lys Arg Arg Asp Gly Tyr Leu Phe Gln Leu  
20 25 30

Leu Arg Ile Ala Asp Ala His Leu Asp Arg Val Glu Asn Thr Thr Val  
35 40 45

Tyr Tyr Leu Val Leu Asp Val Gln Glu Ser Asp Cys Ser Val Leu Ser  
50 55 60

Arg Lys Tyr Trp Asn Asp Cys Glu Pro Pro Asp Ser Arg Arg Pro Ser  
65 70 75 80

Glu Ile Val Ile Gly Gln Cys Lys Val Ile Ala Thr Arg His Ser His  
85 90 95

Glu Ser Gln Asp Leu Arg Val Ile Asp Phe Asn Cys Thr Thr Ser Ser  
100 105 110

Val Ser Ser Ala Leu Ala Asn Thr Lys Asp Ser Pro Val Leu Ile Asp  
115 120 125

Phe Phe Glu Asp Thr Glu Arg Tyr Arg Lys Gln Ala Asn Lys Ala Leu  
130 135 140

Glu Lys Tyr Lys Glu Glu Asn Asp Asp Phe Ala Ser Phe Arg Val Asp  
145 150 155 160

Arg Ile Glu Arg Val Ala Arg Val Arg Gly Gly Glu Gly Thr Gly Tyr  
165 170 175

Phe Val Asp Phe Ser Val Arg Asn Cys Pro Arg His His Phe Pro Arg  
180 185 190

His Pro Asn Val Phe Gly Phe Cys Arg Ala Asp Leu Phe Tyr Asp Val  
195 200 205

Glu Ala Leu Asp Leu Glu Ser Pro Lys Asn Leu Val Ile Asn Cys Glu  
210 215 220

Val Phe Asp Pro Gln Glu His Glu Asn Ile Asn Gly Val Pro Pro His  
225 230 235 240

Leu Gly His Pro Phe His Trp Gly Gly His Glu Arg Ser Ser Thr Thr  
245 250 255

Lys Pro Pro Phe Lys Pro His Gly Ser Arg Asp His His His Pro His  
260 265 270

Lys Pro His Glu His Gly Pro Pro Pro Pro Asp Glu Arg Asp His  
275 280 285

Ser His Gly Pro Pro Leu Pro Gln Gly Pro Pro Pro Leu Leu Pro Met  
290 295 300

Ser Cys Ser Ser Cys Gln His Ala Thr Phe Gly Thr Asn Gly Ala Gln  
305 310 315 320

Arg His Ser His Asn Asn Ser Ser Asp Leu His Pro His Lys His  
325 330 335

His Ser His Glu Gln His Pro His Gly His His Pro His Ala His His  
340 345 350

Pro His Glu His Asp Thr His Arg Gln His Pro His Gly His His Pro  
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His Gly His His Pro His Gly His His Pro His Gly His His Pro His  
370 375 380

Gly His His Pro His Cys  
385 390

<210> 9

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<212> PRT

<213> Homo sapiens

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His Leu Gly His Pro Phe His Trp Gly Gly His Glu Arg Ser Ser Thr  
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Thr Lys Pro Pro Phe Lys Pro His Gly Ser Arg Asp His His His Pro  
20 25 30

His Lys Pro His Glu His Gly Pro Pro Pro Pro Pro Asp Glu Arg Asp  
35 40 45

His Ser His Gly Pro Pro Leu Pro Gln Gly Pro Pro Pro Leu Leu Pro  
50 55 60

Met Ser Cys Ser Ser Cys Gln His Ala Thr Phe Gly Thr Asn Gly Ala  
65 70 75 80

Gln Arg His Ser His Asn Asn Ser Ser Asp Leu His Pro His Lys  
85 90 95

His His Ser His Glu Gln His Pro His Gly His His Pro His Ala His  
100 105 110

His Pro His Glu His Asp Thr His Arg Gln His Pro His Gly His His  
115 120 125

Pro His Gly His His Pro His Gly His His Pro His Gly His His Pro  
130 135 140

His Gly His His Pro His Cys  
145 150

<210> 10

<211> 25

<212> PRT

<213> Homo sapiens

<400> 10

Cys His Asp Phe Gln Asp Tyr Gly Pro Cys Asp Pro Pro Pro His Asn  
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Gln Gly His Cys Cys His Gly His Gly

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Arg Pro Phe His Cys Arg Gln Ile Gly Ser  
20 25

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20 25 30  
Lys Pro Asp Asn